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### REMARKS

Claims 1-15 are pending in the present application, and are currently under consideration. No claims are amended. No new matter has been added.

For the Examiner's convenience, Applicants' remarks are presented in the same order in which they were raised in the Office Action.

#### Rejections under 35 U.S.C. § 102(b)

A. Claim 1 stands rejected under 35 U.S.C. 102(b) as being anticipated by Yasui et al. (U.S. Pat. No. 5,403,098), Ichiyama (U.S. Pat. No. 5,658,080), or Pan (U.S. Pat. No. 5,246,294).

*Yasui et al. (U.S. Pat. No. 5,403,098)*

The Examiner alleges that Yasui et al. disclose all limitations of claim 1 in Figures 2A and 2B.

Applicants respectfully traverse this ground for rejection, since *Yasui et al.* fail to teach multiple elements of claim 1. Claim 1 is directed to a "counterplate attached to the sleeve, the counterplate including a radial section and an axial section, the axial section being attached to the radial section and partially defining a labyrinth to remove bearing fluid from a region defined between the shaft and axial section." Figure 2A and 2B fail to show a counterplate including a radial section and axial section, let alone radial and axial sections of a counterplate that partially define a labyrinth. The "labyrinth" disclosed in Fig. 2A and 2B of *Yasui et al.* is defined by "an annular sealing plate 3 and shaft end member 11," not a counterplate. (Col. 3, lines 15-18).

In addition, *Yasui et al.* fail to show a "labyrinth to remove bearing fluid from a region defined between the shaft and axial section" of the counterplate. *Yasui et al.* merely show opposing groove labyrinths for "oil pooling." According to *Yasui et al.*:

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“oil pooling space 4 at the ends of the shaft 1 and the sleeve 2, the sealing plate 3, and the annular recessed domain 2c. Therefore, even when the internal lubricant leaks from the interior of the bearing body, the leaking lubricant is securely held in the oil pooling space 4 without leaking out of the hydrodynamic body.” (Col. 3, lines 25-32).

The features of the *Yasui et al.* device not act as or provide thrust bearings or capillary seals, or comprise any part of the motor bearings. They do not remove oil. They can only contain oil.

Because Yasui et al. fail to disclose multiple elements of claim 1, Yasui et al. fail to anticipate the claims. Applicants respectfully request that this ground for rejection be withdrawn.

*Ichiyama (U.S. Pat. No. 5,658,080)*

The Examiner alleges that *Ichiyama* discloses all limitations of claim 1 in Figure 2. *Ichiyama* also fails to teach multiple elements of claim 1.

*Ichiyama* does not disclose a counterplate with “an axial section and radial section partially defining a labyrinth capable of removing bearing fluid from a region defined between the shaft and axial section,” as required by claim 1. The structure described by *Ichiyama* does not include a counterplate with an axial and radial section. Instead, the structure is a “tapered sealing member comprising a tapered portion 32...at the outer surface of the thrust hydro-dynamic bearing 54a provided on the upper surface of the thrust plate 23.” (Col. 4, lines 17-20, emphasis added). *Ichiyama* also provides “a narrowed sealing member comprising the shoulder portion 60 and over plate 25 ...at the outside of this tapered sealing member, and the space 58 is arranged between these sealing members.” (Col. 4, lines 21-24, emphasis added). *Ichiyama* further discloses that in using the provided design, “it becomes difficult for oil to leak from the tapered portions 32 and 37.” The sealing members disclosed in *Ichiyama* merely prevent oil from leaking out of the tapered portions, and are not designed to “remove bearing fluid from a region defined between the shaft and axial section” of the counterplate as required by the pending claims.

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In addition, the sealing members taught by *Ichiyama* address different problems than in the present application. Specifically, *Ichiyama* is designed to separate the oil of the top thrust from the bottom thrust and journal bearings with a vented air pocket, each bearing circuit having its own oil reservoir, and venting through a total of 4 air-oil interfaces. The present application, however, discloses a single continuous oil path with a single common oil reservoir with venting through 2 air-oil interfaces.

Because *Ichiyama* fails to meet every limitation of the pending claims, *Ichiyama* fails to anticipate the invention.

*Pan (U.S. Pat. No. 5,246,294)*

The Examiner alleges that *Pan* discloses all limitations of claim 1 in Figure 3.

Applicants respectfully traverse this ground for rejection, since *Pan* fails to teach multiple elements of claim 1. *Pan* fails to disclose a counterplate, an axial section of the counterplate attached to a radial section of the counterplate that partially defines a labyrinth, as required by claim 1. Instead, *Pan* Fig 3 shows a dual conical bearing design with 6 air/oil meniscus interfaces. The structures disclosed by *Pan* are not counterplates, nor are the structures designed to remove bearing fluid.

Other embodiments of *Pan* fail to disclose "a labyrinth to remove fluid from a region defined between the shaft and axial section," as required by claim 1. For example, *Pan* Figure 2a shows additional air/oil meniscus interfaces between the shaft and end cap (not a counter plate) that forms a capillary trap seal. A trap seal promotes collection of oil at this point, not removal of fluid from a region defined between the shaft and axial section of the counterplate.

Because *Pan* fails to meet every limitation of claim 1, *Pan* fails to anticipate the claimed invention.

Applicants respectfully request withdrawal of the above rejections.

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**B.** Claims 1-15 stand rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al. (U.S. Pat. No. 5,558,445).

Chen fails to teach multiple elements of the claimed invention. The Examiner argues that Chen, Fig. 2 "shows a fluid dynamic motor assembly comprising a shaft (14), a sleeve (16) configured to rotate about a rotation axis, and a counterplate attached to the sleeve, the counterplate (52) including a radial section (64) and an axial section (56), the axial section being attached to the radial section and partially defining a labyrinth to remove bearing fluid from a region defined between the shaft and axial section." In fact, the structure identified as a "counterplate" by the Examiner is in fact an "oil containment bushing," or seal, not a counterplate (see Col. 5, lines 58-60). The oil containment bushing does not function as a counterplate or provide any bearing function. In addition, the so-called "radial section (64)" is in fact an area of the containment seal treated with a "thin film barrier material" (see Col. 6, lines 64-65), not a radial section of a counterplate, as required by the claims. In sum, the "oil containment bushing" is a radically different structure than the claimed counterplate.

Because Chen fails to meet every limitation of claim 1, Chen also fails to meet every limitation of claims 2-15.

Applicants respectfully request that these grounds for amendment be withdrawn.

### CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and

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authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no.

146712008500. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

By 

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